



COVID-19 during Pregnancy

Updated July 1, 2022

What We Have Learned



Although the overall risks are low:

- [People who are pregnant or recently pregnant](#) are more likely to get very sick from COVID-19 compared to people who are not pregnant.
 - Severe illness includes illness that may require admission to an intensive care unit (ICU), ventilation, extracorporeal membrane oxygenation (ECMO, an advanced life support technique used for patients with life-threatening heart and/or lung problems), and may even result in death.
- People who have COVID-19 during pregnancy are also at increased risk for complications that can affect their pregnancy and developing baby. For example, COVID-19 during pregnancy increases the risk of delivering a [preterm](#) (earlier than 37 weeks) and/or a stillborn infant.
- The emergence of the Delta variant in June of 2021 was associated with an even greater risk for severe outcomes for pregnant people, including an increase in ICU admissions, an increase in required medical interventions such as invasive

ventilation and ECMO, and an increased number of deaths than was previously reported in the pre-Delta period (January 1, 2020 – June 26, 2021).

Since January 2020, health departments have reported cases of COVID-19 to CDC, including cases diagnosed in people who were pregnant. CDC will report the available data on [its website](#) through July 19, 2022.

[The most recent analysis of this data](#) [↗](#), published June 2022, found that, when comparing pregnant women aged 15-44 in the pre-Delta period (January 1, 2020 – June 26, 2021) with those in the Delta period (June 27, 2021 – December 25, 2021):

- The risk of admission to an ICU was 41% higher in the Delta period.
- The risk of invasive ventilation or ECMO was 83% higher in the Delta period.
- The risk of death in the Delta period was 3.3 times the risk in the pre-Delta period.

The analysis also compared cases in pregnant women with cases in nonpregnant women aged 15-44 reported from January 1, 2020, to December 25, 2021. Compared with nonpregnant women, pregnant women had:

- 5 times the risk of admission to an ICU; and
- a 76% increased risk of invasive ventilation or ECMO.

During the Delta period the risk of death for pregnant women was 1.3 times the risk of death for women who were not pregnant.

What We are Doing to Learn More

CDC continues to support multiple efforts to increase our understanding of the impact of COVID-19 on pregnant people and infants. Data collected as part of these efforts can help direct public health action and inform clinical guidance for the care of affected pregnant people and their infants.

Pregnancy and Neonatal Surveillance

Health departments submitted supplemental data on COVID-19 cases among pregnant women and infants up to 6 months of age to CDC through the [Surveillance for Emerging Threats to Mothers and Babies Network \(SET-NET\)](#).

[See the most recent data on COVID-19 during pregnancy](#)

[See CDC articles and key findings from reports using SET-NET data](#)

Maternal and Infant Health Surveillance: COVID-19 Supplement

CDC's Division of Reproductive Health is collaborating with the [Council of State and Territorial Epidemiologists](#) [↗](#) to provide support and resources to state, tribal, local, and territorial public health agencies to add COVID-19 questionnaire supplements to existing maternal and infant health surveillance systems. The questionnaire supplements collect data on experiences related to COVID-19, including vaccination, of pregnant and postpartum women and infants.

Impact of SARS-CoV-2 Infection During Pregnancy on Obstetric and Neonatal Outcomes – Icahn School of Medicine at Mt. Sinai

The [Icahn School of Medicine at Mt. Sinai](#) is conducting a study to estimate the percentage of pregnant women who have been infected with SARS-CoV-2, the virus that causes COVID-19. Using data from electronic health records, the study also examines associations between recent SARS-CoV-2 infection and adverse pregnancy outcomes. Researchers will determine the extent to which SARS-CoV-2 infection impacts pregnant women in underserved communities in New York City and will explore the role of maternal stress during the pandemic.

Perinatal COVID-19 in the U.S.: Surveillance and Epidemiology – Children’s Hospital of Philadelphia (CHOP) and the University of Florida, College of Medicine – Jacksonville

This national registry at [Children’s Hospital of Philadelphia](#) and the [University of Florida, College of Medicine – Jacksonville](#) captures information in real time about pregnant women with COVID-19 and their newborn infants. The information collected will contribute to a greater understanding of the potential modes of transmission, risk factors, and rates of transmission of SARS-CoV-2 infection during pregnancy and the impact on newborns.

Pregnancy and Household Transmission COVID-19 Study – University of Washington

The [University of Washington](#) is conducting a study in South King County, Washington to investigate adverse health outcomes and other factors associated with symptomatic and asymptomatic SARS-CoV-2 infection among 1,000 pregnant women screened for SARS-CoV-2 specific IgG antibodies. The study is also estimating potential household transmission and duration of antibodies over time (6 months) among pregnant women and their household contacts.

Epidemiology of SARS-CoV-2 in Pregnancy and Infancy (ESPI) Network

The ESPI Electronic Cohort study is collecting information from the medical records of women who received prenatal care at three participating sites and reached the end of their pregnancies between March 2020 and February 2021. This study aims to understand the characteristics of SARS-CoV-2 infection during pregnancy and the 6 months after the end of pregnancy, including among infants up to 6 months of age. It also aims to identify risk factors for severe COVID-19 disease, describe the use of investigational and off-label therapeutics, and evaluate COVID-19’s effects on pregnancy and infant outcomes.

The ESPI Community Cohort study enrolls pregnant women at less than 28 weeks of pregnancy and follows them through the end of their pregnancies with weekly surveillance for SARS-CoV-2 infection and symptoms of COVID-19. Information is also collected 2-4 weeks after the end of their pregnancies, on end-of-pregnancy, infant, and postpartum outcomes.

Identification of History of SARS-CoV-2 Infection among Pregnancy-Associated Deaths

[Maternal mortality review committees \(MMRCs\)](#) are multidisciplinary committees at the state and local level that perform comprehensive reviews of pregnancy-associated deaths (deaths during or within 1 year of the end of pregnancy). To improve identification of pregnancy-associated deaths with a history of SARS-CoV-2 infection, CDC collaborated with 9 jurisdictional health departments to develop [best practices](#) for MMRCs. CDC continues to work with MMRCs to develop best practices for data abstraction and reviews of pregnancy-associated deaths with a history of SARS-CoV-2 infection.

Additional Resources

[Pregnant and Recently Pregnant People](#)

[Breastfeeding and Caring for Newborns if You Have COVID-19](#)

[Breastfeeding and Caring for Newborns if You Have COVID-19](#)

[COVID-19 Vaccines While Pregnant or Breastfeeding](#)

[Considerations for Inpatient Obstetric Healthcare Settings](#)

[Care for Breastfeeding People](#)

[COVID-19 Toolkit for Pregnant People and New Parents](#)

Last Updated July 1, 2022